CLAIMS

What is claimed is:

1-17. (Canceled)

18. A cardio myopeptidin comprising:

a polypeptide isolated from hearts of healthy non-human mammals, comprising:

about 75% to about 90% of peptide;

about 6% to about 15% of free amino acid;

less than 2% of ribonucleic acid; and,

less than 7.5% of deoxyribonucleic acid, wherein the molecular weight of the polypeptide is less than 10000 Da.

19. The cardio myopeptidin of claim 18 wherein a weight average of the molecular weight is in the range from about 1000 to about 10000 Da.

20. The cardio myopeptidin of claim 18 wherein the weight average of the molecular weight is in the range from about 2000 to about 8000 Da.

21. The cardio myopeptidin of claim 18 wherein a weight average of the molecular weight is in the range from about 2000 to about 5000 Da.

22. The cardio myopeptidin of claim 18 wherein the non-human mammals comprise pigs, cattle, sheep, rabbits, or horses.

23. The cardio myopeptidin of claim 18 wherein the non-human mammals comprise infant mammals.

24. The cardio myopeptidin of claim 18 wherein the non-human mammals comprise infant pigs.

25. The cardio myopeptidin of claim 18 wherein an isoelectrofocusing electrophoresis of the cardio myopeptidin displays about 2 to about 6 stained bands; wherein the cardio myopeptidin has a stable maximum absorption peak at about 190 to about 210 nm wavelength within a UV spectrum, and wherein the cardio myopeptidin shows five peaks on an FPLC analysis spectrum, with a sum of relative area of about 90% to about 95%.

26. A method for the preparation of the cardio myopeptidin of claim 18 comprising the step of:

(a) cleaning and cutting the hearts of healthy non-human mammals;

(b) homogenizing at least a portion of the hearts by adding sterile distilled water to the myocardium of the hearts of healthy non-human mammals which is cleaned and cut, thereby creating homogenate;

(c) freezing and thawing the homogenate for at least 3 cycles;

(d) heating the homogenate to about 65 to about 95°C;

(d) filtering the homogenate using a plate-and-frame filter to obtain a coarse filtrate, and removing a residue resulting from the filtering;

(e) ultra-filtering the coarse filtrate with a hollow-fiber column to obtain a fine filtrate;

(d) ultra-filtering the fine filtrate using an ultrafiltration membrane to obtain the cardio myopeptidin solution with a molecular weight of less than 10000 Da; and,

(e) concentrating the cardio myopeptidin solution by reverse osmosis to obtain a concentrated cardio myopeptidin solution.

27. The method of claim 26 further comprising the steps of:

testing the quality of concentrated cardio myopeptidin solution; and,

filtering aseptically, filling, and lyophilizing the concentrated cardio myopeptidin solution.

28. The method of claim 26 wherein the sterile distilled water is added in an amount from about 0.5 to about 4 times that of the myocardium of the mammals, and wherein the step of homogenizing comprises rotating at a rotation speed in the range of from about 1000 to about 5000 rpm/min.

29. The method of claim 26 wherein the freezing step is performed at a temperature of less than about -5°C for about 24 to about 72 hours; and wherein the heating step comprises water bath heating or direct heating at a temperature of about 70 to about 90°C for not more than 2 hours.

30. The method of claim 26 wherein the plate and frame filter comprises medium-speed filter paper having pores of less than 10μ; wherein fine filtrate having a molecular weight of less than 12000 Da is obtained through a hollow fiber column, and wherein final filtrate with a molecular weigh of less than about 10000 Da is obtained by intercepting part of the solution through an ultrafiltration membrane.

31. A method of using the cardio myopeptidin of claim 18 comprising step of preparing a medicament for the treatment of cardiovascular disease or myocardial ischemia-reperfusion injuries.